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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/479,245	01/07/2000	ETSURO KISHI	684.2954	2818

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EXAMINER

LAO, LUN YI

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 03/20/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Dec

Office Action Summary

Application No.
09/479,245

Applicant(s)
Kishi et al

Examiner
Lun-yi Lao

Art Unit
2673



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 11, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above, claim(s) 7-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 13, and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Election/Restriction

1. Applicant's election with traverse of Species I(claims 1-6 and 13-14) in Paper No. 18 is acknowledged. The traversal is on the ground(s) that a search of the relevant art for one species will require substantial consideration of the art relevant to the other species. This is not found persuasive because the search for the Species I of charged particles having an adhesive layer is different from the Species II of II of electrodes having an adhesive layer unless these two Species are not patentably distinct. Furthermore, claims 1 and 14 claim charged particles have an adhesive layer and the adhesive layer comprising a polymer with a glass transition temperature of -35° C to +35° C, which is different from claim 7 claim the fixing surfaces are provided by a charged film formed on the associated electrodes, and the charged film having a constant charge of a polarity opposite to the colored charged particles regardless of a polarity of electricity supplied to the associated electrodes.

The requirement is still deemed proper and is therefore made FINAL.

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Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al(6,241,921) in view of Mochizuki et al(5,652,079).

As claims 1, 3, 5, 13 and 14, Jacobson et al teach an electrophoretic display device comprising two electrodes(120, 125 or 140, 145); fixing surfaces each associated with one of the two electrodes or charged films(8,9)(an electrophoretic display(see figures 1B, 1D, 1E; column 1, lines 40-44; column 7, lines 31-38 and column 8, lines 28-34); an electrophoretic layer disposed in a cell and having an insulating liquid(dielectric liquid medium) and a colored charged particles disposed in the electrophoretic layer and voltage supply means for applying a voltage between the electrodes(120, 125 or 140, 145)(see figures 1B, 1D, 1E; column 1, lines 30-44; . When a voltage is applied between the electrodes(8,9), the colored charged particles(6) is provided with an adhesive layer(polymer coated) allowing repetitive attachment thereto and separation therefrom of the color charged particles(205)(see figure 2B; column 1, lines 30-39; column 4; lines 54-58 and column 8, lines 56-67).

Jacobson et al fails to disclose the adhesive layer have a glass transition temperature of

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-35°C to + 35°C.

Mochizuki et al a particle having an adhesive layer(resin or polymer or copolymer) having low glass transition temperature(see column 10, lines 30-37). It would have been obvious to have modified Jacobson et al with the teaching of Mochizuki et al, since the particles of Mochizuki et al and Jacobson et al could be used in a toner or an electrophoretic display(see Mochizuki's column 1, lines 39-47 and Jacobson's column 1, lines 16-23 and lines 30-39); and their device are operated around room temperature(see Mochizuki's column 10, lines 30-38 and Jacobson's column 4, lines 32-50).

As to claim 5, Jacobson et al teach two electrodes (215, 220) are oppositely disposed in the cell structure so as to allow vertical movement of colored charged particles(205) between the electrodes(215, 220)(see figure 2B; column 1, lines 30-30-38 and column 8, lines 56-67).

4. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al(6,241,921) in view of Mochizuki et al(5,652,079) and Albert et al(6,172,798).

As to claim 4, Jacobson et al modified fail to disclose the insulating liquid has a volumetric resistivity of at least 10^{12} ohm.cm.

Albert et al teach an electrophoretic display having an insulating liquid(17) with a volumetric resistivity about 10^{15} ohm.cm.(see figure 1 and column 15, lines 45-53). It would have been obvious to have modified Jacobson et al with the teaching of Albert et al, since displays of Jacobson et al and Albert et al both are electrophoretic displays have insulating liquid(see

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Jacobson's column 1, lines 30-38 and Albert's insulating liquid with 10^{15} ohm.cm. should be suitable for Jacobson's electrophoretic display.

As to claim 6, Jacobson et al(6,241,921) as modified fail to place two electrodes(8,9) on a same plane so to allow the colored charged particles moving in an horizontal direction.

Albert et al teach an electrophoretic display having two electrodes(30, 40) mounted on the same plane(an horizontal plane)(see figures 1A, 1B and 3A-3D). When a voltage is applied to the two electrodes(30, 40), particles(50) are moving in an horizontal direction(see figures 1A, 1B and column 9, lines 27-61). It would have been obvious to have modified Jacobson et al as modified with the teaching of Albert et al, since such a modification would have involved a mere changed in location of an electrodes and a changed location of an electrodes is generally recognized as being within the level of ordinary skill in the art.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jacobson et al(6,323,989) teach an electrophoretic display having a particles with an adhesive layer(polymer).

Ikeda(6,239,896) teaches an electrophoretic display having a memory characteristic.

6. Any inquiry concerning this communication or earlier communications from the examiner

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should be directed to Lun-yi, Lao whose telephone number is (703) 305-4873.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

March 19, 2003

Lun-yi Lao
Lun-yi Lao

Primary Examiner